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of a patient electrode is bounded on at least one side by a conductor **1677**. Conductor **1677** may have any size and shape as long as at least a portion of the conductor extend into opening **1634** along at least a portion of sidewall **1634**. In one embodiment, conductor **1677** extends through opening **1634** 5 to completely cover at least apportion of the circumference of the opening **1634**. Conductor **1677** may be made of a radiolucent conductive material such as a conductive polymer or a conductive carbon. A radiolucent leadwire (not shown) formed of a conductive carbon may be positioned in a passageway **1699** of the connector housing and joined to conductor **1677**. In use, once an electrode stud is positioned in opening **1634** and engagement member **1636** is released, engagement face **1637** captures the electrode stud between the engagement face **1637** and a portion of conductor **1677**. 15

According to one aspect of the invention, the radiolucent electrode connectors of the present invention are advantageous because they need not be removed from a patient before imaging reducing the time required to administer often critical procedures. The radiolucent electrode connectors of the present invention may also increase patient safety by reducing or eliminating the dangers associated with imaging conventional electrode connectors. Moreover, the radiolucent electrode connectors of the present invention may allow ECG patient monitoring during imaging. 20

It will be understood that various modifications, alterations, and improvements will readily occur to those skilled in the art. Such modifications, alterations, and improvements are intended to be part of this disclosure, and are intended to be within the spirit and scope of the invention. Further variations of the above-disclosed and other features and functions, or alternatives thereof, may be desirably combined into many other different systems, instruments and applications. Various presently unforeseen or unanticipated alternatives, modifications, variations or improvements therein may be subsequently made by those skilled in the art, which are also intended to be encompassed by the following claims. Accordingly, the foregoing description and drawing are by way of example only. 25

What is claimed is:

1. An ECG connector assembly, comprising:
 - a housing having an interior recessed surface having disposed therein an opening dimensioned to operably receiving a press stud of an ECG electrode pad;
 - a radiolucent conductor disposed on at least a portion of the interior recessed surface; a radiolucent lead wire con-

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ductor extending from a proximal end of the housing and operably coupled to the radiolucent conductor;

- an engagement member pivotably disposed upon the interior recessed surface and having an engaging face and a pivot, wherein the engagement member is pivotable between a first position whereby the engaging face is closer to a top portion of the opening and a second position whereby engaging face is further from a top portion of the opening;
- an arcuate stiffener disposed between an end of the engaging face distal from the pivot and pivot of the engagement member; and
- a radiolucent resilient member configured to bias the engagement member towards the first position; wherein the arcuate stiffener is spaced apart from the engaging face.

2. The ECG connector assembly in accordance with claim 1, wherein the radiolucent resilient member includes a plurality of lobes.

3. The ECG connector assembly in accordance with claim 1, wherein the radiolucent resilient member includes a center opening defined therein.

4. The ECG connector assembly in accordance with claim 1, wherein the radiolucent resilient member includes one or more projections that cooperatively interfere to generate tactile feedback when the engagement member is moved between the first position and the second position.

5. The ECG connector assembly in accordance with claim 1, wherein the radiolucent conductor extends onto at least a portion of a sidewall of the opening.

6. The ECG connector assembly in accordance with claim 1, wherein the radiolucent conductor is formed from carbon.

7. The ECG connector assembly in accordance with claim 1, wherein

the radiolucent conductor is formed by:

- dispersing conductive carbon powder over the interior recessed surface; and
- fusing the conductive carbon powder to the interior recessed surface.

8. The ECG connector assembly in accordance with claim 1, wherein the radiolucent resilient member has a shape selected from the group consisting of substantially spherical, substantially cylindrical, or substantially ovoid.

9. The ECG connector assembly in accordance with claim 1, wherein the pivotable axis of the engagement member is orthogonal to the interior recessed surface. 45

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